

# Birds of Mys Shmidta, north Chukotka, Russia

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A survey of avifauna was carried out in the Mys Shmidta area, north Chukotka, Russia from 8 June to 12 July 2011. A total of 90 species was recorded in the area, which together with literature data made a final list of 104 species. For several species this area is beyond the northern, north-eastern or north-western limits of their known distribution. We collected new data for 19 globally or locally threatened species. Tundra Swan *Cygnus columbianus*, Emperor Goose *Anser canagica*, American Golden Plover *Pluvialis dominica*, Western Sandpiper *Calidris mauri*, Semipalmated Sandpiper *C. pusilla*, Northern House Martin *Delichon urbica* and Barn Swallow *Hirundo rustica* were all confirmed to be breeding. Breeding of Brent Goose *Branta bernicla nigricans*, Spectacled Eider *Somateria fischeri* and Steller's Eider *Polysticta stelleri* was judged to be 'very likely'. There was no evidence for breeding of Ross's Gull *Rhodostethia rosea* despite several records. Two Eurasian Dotterels *Eudromias morinellus* were recorded displaying for the first time in the area, but the status of the species is unclear. The area is important for Snowy Owl *Nyctea scandiaca*, and as moulting grounds for Emperor Goose. Canada Goose *Branta canadensis*, Baikal Teal *Anas formosa*, Bar-tailed Godwit *Limosa lapponica*, Slaty-backed Gull *Larus schistisagus*, Thayer's Gull *L. thayeri*, Black-headed Gull *L. ridibundus*, White-tailed Eagle *Haliaeetus albicilla*, Steller's Sea Eagle *H. pelagicus*, Osprey *Pandion haliaetus*, Arctic Warbler *Phylloscopus borealis* and House Sparrow *Passer domesticus* are more likely to be rare vagrants or migrants. An observation of a Pine Siskin *Carduelis pinus* is the first record for Eurasia.

## INTRODUCTION

Mys Shmidta or the Cape of Shmidt is a prominent headland on the Arctic coast of Chukotka, Russia. It is a remote place with a very harsh climate. Information on birds from this area is difficult to obtain but has inherent value because several globally or locally threatened species breed here and human impact on the habitat has been small. No systematic checklist of birds of the area has been made until now.

Since Portenko (1972, 1973) worked on the birds of the Chukchi Peninsula, few ornithological papers have been published on the region and no avifauna surveys have been made. Existing publications include a short note by Tomkovich *et al.* (1991) on the area around Mys Shmidta airport, several notes by Stishov (1991, 1992, 1997) including one on the bird community of the Ekvyvatap river, two papers by Stishov & Maryuhnich (1991a, b) on particular species and short communications on brief visits by Andreev & Kondratyev (1996), Dorogoi (1996, 1997, 1998), Dorogoi & Beaman (1998) and Menyushina (2000).

In this paper the results of an avifauna survey carried out in the Mys Shmidta area, north Chukotka, Russia, in summer 2011 are presented. Together with data from the literature the final list of birds for the area is 104 species. The purpose of the investigation was to survey this area for potential breeding grounds and suitable habitats for the Spoon-billed Sandpiper *Eurynorhynchus pygmeus* and to document the avifauna of this remote and hard-to-reach region, which had previously received little ornithological attention.

## STUDY AREA AND METHODS

During an ornithological expedition to the Mys Shmidta area between 8 June and 12 July 2011 to survey breeding areas of the Spoon-billed Sandpiper, the other avifauna was also surveyed. Birds were identified mainly using binoculars and telescopes, and the species, number of individuals and habitat was noted in each case. Overall, research was focused on the Akatan lagoon and the Ekvyvatap river delta, plus as much of the Kosa Dvukh Pilotov Spit (Spit of Two Pilots) as could be accessed on foot or by kayak, the area immediately surrounding Mys Shmidta settlement and an area to the north-west of Mys Shmidta around the Erokmanky lagoon (Table 1). There were four main habitat types in the area: gravel-sand, tussock tundra, grassy tundra and polygonal tundra. The spits running north-west to south-east were mainly gravel and sand, either

pure gravel-sand or only sparsely covered with lichens and grass, at least on the main narrow sections running immediately parallel to the ocean. About 60% of the spits visited were covered by this type of vegetation. The higher ground on the spits and the areas around the lagoons were generally cotton-grass tussock tundra, and grassy tundra was found on lowlands surrounding the spits, which were still flooded until almost the end of June, being frequented by different species of geese. Dried polygonal tundra was found in patches around the Ekvyvatap river delta. Small hills around the settlement were covered by typical tussock tundra.

The temperature in the region is generally cold; the highest temperature experienced during the day was 14°C and the typical daytime temperature was 5–7°C. Storms were frequent, with a week-long storm in the first week of July with strong winds and heavy snow.

**Table 1.** Main survey sites in the Mys Shmidta, north Chukotka area, 2011.

Site	Coordinates
Mys Shmidta, airport area	68.872°N 179.386°W
Mys Shmidta, Kozhevikova cliff	68.931°N 179.490°W
Mys Shmidta, sea coast	68.902°N 179.425°W
Mys Shmidta, base of Kosa Dvukh Pilotov spit	68.872°N 179.358°W
Mys Shmidta, settlement	68.890°N 179.409°W
Tundra near Ryrkaypiy settlement	68.896°N 179.458°W
Tundra near Mys Shmidta settlement	68.889°N 179.431°W
Ekvyvatap River Delta & nearby tundra	68.783°N 178.991°W
Akatan lagoon & Kosa Dvukh Pilotov spit	68.753°N 178.983°W
Akatan lagoon mouth, Kosa Dvukh Pilotov spit	68.780°N 178.956°W
Tynkergynpil'gyn lagoon, Kosa Dvukh Pilotov spit	68.683°N 178.689°W
Tynkergynpil'gyn lagoon mouth, Kosa Dvukh Pilotov spit	68.573°N 178.449°W
Erokmanky lagoon, coast	68.951°N 179.918°E
Erokmanky lagoon, Odnobokiy stream	68.969°N 179.949°E
Erokmanky lagoon, Nutechikun spit	68.992°N 179.925°E
Erokmanky lagoon, tundra	68.944°N 179.986°E
Erokmanky lagoon, hills	68.903°N 179.867°E

## RESULTS

Ninety species were recorded in the area which together with literature data yielded a final list of 104 species (Appendix 1). Details of the most interesting and significant are given below,

including new records, new breeding records, regional rarities and globally threatened species.

#### **Whooper Swan *Cygnus cygnus***

Two records: one across the Akatan lagoon on 18 June was pursued by a Tundra Swan that appeared to strike it on the head and neck. Another Whooper Swan stayed near a tundra lake with a Tundra Swan on 23 and 24 June, in the Ekvyvatap delta. Images were obtained as these records are far to the north of known nesting areas (Krechmar & Kondrat'ev 2006).

#### **Tundra Swan *Cygnus columbianus***

A common breeding species around Mys Shmidta: six nesting pairs within 25 km<sup>2</sup> were recorded in the Ekvyvatap delta tundra. Some non-breeding pairs were also recorded, but no large groups were seen. A considerable number of birds had a mix of traits attributable to *Cygnus columbianus bewickii* or *C. c. columbianus*; some individuals that could be reliably identified as either *bewickii* or *columbianus* belonged to mixed pairs. Of note, in all such mixed pairs the males appeared to possess *columbianus* traits. Possibly the study area is located in the area of overlap of the two forms (Rees 2006). Overall three nests with eggs were found: a nest in the Ekvyvatap River delta with one egg on 14 June and three eggs on 19 June; a nest in the same area found on 23 June but not checked for eggs; and a nest with three eggs found on 7 July on the Nutechikun spit.

#### **Snow Goose *Anser caerulescens***

Breeding was not recorded. From 9 to 28 June Snow Geese were seen regularly with a maximum of 64 birds in several flocks on 13 June in the mouth of the Ekvyvatap River and 60 birds in four flocks on 14 June; all flocks were flying north-west. All observed individuals belonged to the white morph. Residents of Mys Shmidta reported that there is a pronounced autumn migration, occasionally reaching thousands of birds per day. Three Snow Geese rings were obtained from local hunters; two individuals, a male and a female, had been ringed as adults on Wrangel Island and one male as a juvenile in Alaska, 45 km east of Deadhorse.

#### **Emperor Goose *Anser canagica***

Near Threatened. Common breeding species in the Ekvyvatap delta and surrounding area. We observed several pairs holding territories, including one chasing away a Parasitic Skua *Stercorarius parasiticus*. A nest with three eggs was found in the Ekvyvatap delta on 14 June and a second nest was found nearby on 26 June. A pronounced migration of Emperor Geese to the north-west of Mys Shmidta was observed from 17 to 29 June. A maximum of 1,670 flew north-west between 10h00 and 16h00 on 27 June. It appears that this species is expanding its range westwards, as it was not observed in the vicinity of Mys Shmidta in the early twentieth century, but by 1970 it was breeding to the west of Ukouge lagoon (Portenko 1972) about 100 km south-east of the eastern part of the surveyed area. Hunters handed over a ring from a male bird collected at nearby Ryrkaypiy settlement; the bird had been ringed as an adult in Alaska 37 km south-east of Chevak.

#### **Canada Goose *Branta canadensis***

A solitary Canada Goose was observed on 19 and 20 June in the Ekvyvatap delta. It was flying with two Greater White-fronted Geese *Anser albifrons* and was slightly larger than them. Judging by several traits, such as the relatively short bill and neck, it may be the *parvipes* subspecies, common in northern Alaska. It appears that this is the first record of this form in Russia, apart from the introduced population in Eurasia (Koblik *et al.* 2006). Prior to this observation there was only one record of a wild Canada Goose in East Asia, seen on Hokkaido, Japan, in 2006, which was also presumed to be a

*parvipes* form (Brazil 2009). The form *minima* was also observed in the vicinity of Anadyr airport in Chukotka. A solitary bird was seen in a flock of Brent Geese on a lagoon near the airport from 3 to 5 June 2011. Images of both birds were obtained.

#### **Brent Goose *Branta bernicla***

Observed daily from 9 to 27 June in flocks and pairs in the Ekvyvatap delta and nearby on the Akatan lagoon with up to 143 birds on 17 June. On 11 June one pair was observed to be possibly breeding, but the birds were not seen on subsequent days. However, breeding is possible, as sporadic breeding pairs were observed in the first half of the twentieth century in the vicinity of Mys Shmidta (Portenko 1972). This species is commonly hunted by the local population; in the late 1990s one female shot in the vicinity of Polyarniy settlement had been ringed as a juvenile in Alaska, 20 km to the south of Chevak.

#### **Baikal Teal *Anas formosa***

A single male was swimming on a lake near Mys Shmidta on 21 June. The area is outside the current breeding range (Krechmar & Kondrat'ev 2006), although in the first half of the twentieth century the species was observed in the area relatively frequently (Portenko 1972).

#### **Spectacled Eider *Somateria fischeri***

Uncommon, possibly breeding in the tundra near the sea. Three pairs were observed on 26 June on lakes in the Ekvyvatap delta. Overall it was observed on 12 days with a maximum daily count of 32; all were flying to the north-west on 16 June, and 30 birds, mostly young males, were observed on the sea near Mys Shmidta on 10 July. Stishov (1992) found the species to be common on lakes and bogs around the lower reaches of the Ekvyvatap River.

#### **Steller's Eider *Polysticta stelleri***

Vulnerable. Common to uncommon at the time of migration. Possibly breeding in the tundra on coastal lakes. Four pairs were holding territories on 14 June in Ekvyvatap delta. The species was regularly seen in the vicinity of Mys Shmidta, with a maximum of 60 birds, including some pairs, on 9 June. Unfortunately the species, which is Vulnerable, is hunted in the area; eight rings were collected from individuals shot near Mys Shmidta; all had been ringed in Alaska.

#### **Bar-tailed Godwit *Limosa lapponica***

Vagrant; only one record of a female feeding on tundra near the Ekvyvatap delta on 26 June. It is also a rare vagrant to Wrangel Island (Stishov *et al.* 1991).

#### **Red Knot *Calidris canutus***

Seven observations were made, all on the sand spits or mudflats nearby: flocks of nine and five birds on 11 and 14 June on mudflats near the mouth of the Akatan lagoon; three flew north across the Akatan lagoon in the direction of Wrangel Island on 18 June; two were in tundra on the Spit of Tynkergynpil'gyn lagoon on 20 June with two more 1.5 km away; in the same area on 21 June a bird was resting and also in the same area two birds were seen on 22 June; finally on 27 June three birds were in tundra on the spit of Akatan lagoon. Although most records were made on lichen tundra—suitable breeding habitat—displays were not seen or heard. Three individuals had colour flags and had been ringed in Australia—two with yellow flags in north-west Australia, and one with a green flag at Moreton Bay, near Brisbane, Queensland.

#### **Western Sandpiper *Calidris mauri***

Late arrivals; during the first survey on 14 June in Ekvyvatap delta no more than five displaying males were seen, and on the following days, several other birds appeared in nearby areas. Two breeding



areas were found near Mys Shmidta. The first included 10 territories on the Ekvyvatap delta tundra, where a nest with four eggs was found on 25 June. The second area was to the north-west of Mys Shmidta on the Nutechikun spit, where a nest with four eggs was found on 7 July.

#### **Spoon-billed Sandpiper *Eurynorhynchus pygmeus***

Critically Endangered. During the surveys the species was not recorded. However, the expedition found suitable habitat in the region, although limited in extent, and obtained invaluable information on the habitat in the area. The last record of this species in the area was in mid-June 1990 when several displaying males and at least two pairs were found in the Ekvyvatap delta (Stishov & Maryuhnich 1991a). In the 1970s Kishchinski (1988) found it to be a common breeder at the Ukouge lagoon about 100 km south-east of the eastern part of the area surveyed.

#### **Semipalmated Sandpiper *Calidris pusilla***

Near Threatened. A rare breeding species in Eurasia, it was found nesting in areas with sparse vegetation on gravel and sandy patches of the tundra near lagoons. Breeding was recorded in two areas: Ekvyvatap delta (2–3 territories) and in the vicinity of Mys Shmidta, where on 9–11 June up to 10 males were displaying. A brood with four two-day-old chicks was observed on 25 June on the edge of the town. On 28 and 29 June in the vicinity of Mys Shmidta three more broods were observed and one pair was making alarm calls.

The first nest of this species in this area was found on 8 June 1993 near the Mys Shmidta airport (Andreev & Kondratyev 1996). In 1997 at least three pairs were breeding between the airport and the town; a nest at an advanced stage of incubation found on 1 July 1997, and on 4 July 1997 the same nest already had chicks. Two more nests with chicks were observed nearby on the same day, and one pair was observed between the airport and the town on 6 July 1997 (Dorogoi & Beaman 1998). Thus, the population of the Semipalmated Sandpiper in the vicinity of Mys Shmidta continues to thrive and, possibly, is growing slightly.

#### **American Golden Plover *Pluvialis dominicus***

One territorial pair near a nest with a clutch of four eggs was found in the Ekvyvatap delta, with observations continuing between 23 June and 25 June. Images of adults and nest were obtained. This is the first documented breeding record in the Palearctic with both birds confirmed as American Golden Plovers. Prior to this observation an unsuccessful breeding attempt by an American Golden Plover with a Grey Plover *Pluvialis squatarola* was reported (Taldenkov 2006). In 1987–1990 on the lower reaches of the Ekvyvatap River about 30% of plovers had traits that resembled American Golden Plovers (Stishov 1991) and the same author mentioned breeding of the American Golden Plover in the same area in 1990–1993 without further details (Stishov 2004).

#### **Eurasian Dotterel *Eudromias morinellus***

Three records in 2011. A solitary bird was displaying over the Ekvyvatap delta tundra on 14 June. On 15 June in the same area two displaying birds were seen about 1 km from each other, but during later surveys in this area the species was not seen. On a flat hilltop near the Odnobokiy stream a flock of nine was seen on 2 July. This species is regarded as rare since prior to our observations it was reported in Chukotka only once since 2000 (Tomkovich 2007a; P.S. Tomkovich *in litt.*). Records of Eurasian Dotterels near Mys Shmidta are contained in reports on breeding tundra birds in Russia (Dorogoi 1996, 1997).

#### **Thayer's Gull *Larus thayeri***

On 17 June, one bird was resting on the ice of Akatan lagoon with Vega Gulls *Larus vegae*. The bird was about a third smaller

than the Vega Gulls. This is the third record of Thayer's Gull for Russia.

#### **Black-headed Gull *Larus ridibundus***

Vagrant. On 18 June a bird in second-summer plumage was seen near the mouth of the Akatan lagoon and on 20 June two adult birds were swimming in a small bay near Kozhevnikova Cliff.

#### **Ross's Gull *Rhodostethia rosea***

A summer visitor and migrant. Over 10 days between 10 June and 25 June juvenile and adult Ross's Gull were observed at the confluence of the Akatan lagoon with up to eight birds on 11 June.

#### **Common Murre *Uria aalge* or Thick-billed Murre *U. lomvia***

We observed seven murrets flying north-west over the sea on 10 July, but unfortunately too far away for definitive identification to species level. The predominant species on Wrangel Island is Thick-billed Murre, but several hundred Common Murre also breed there (Stishov *et al.* 1991).

#### **Osprey *Pandion haliaetus***

On 3 July an Osprey was seen attempting unsuccessfully to catch fish on Erokynmanky lagoon. Images were obtained. This is the most north-easterly record of the species in Eurasia and approximately 600 km from its known breeding range (Chereshnev 2008).

#### **White-tailed Eagle *Haliaeetus albicilla***

The Mys Shmidta area is about 500 km from the known breeding range of the White-tailed Eagle (Chereshnev 2008). In June 2011 there were three records of White-tailed Eagles: a subadult was sitting on the sea ice in the mouth of Akatan lagoon on 13 June, an adult was seen in the mouth of Tynkergynpil'gyn lagoon on 23 June, and a first-year was flying along Two Pilot Spit on 27 June.

#### **Steller's Sea Eagle *Haliaeetus pelagicus***

Vulnerable. An adult was observed on 27 June on the sea ice in the mouth of Akatan lagoon, and images were obtained; after about 10 minutes, the bird flew away to the north-west. This is the northernmost record of Steller's Sea Eagle in Asia (BirdLife International 2001, Chereshnev 2008).

#### **Barn Swallow *Hirundo rustica***

Two pairs of Barn Swallows were regularly observed in the settlements of Mys Shmidta and Ryrkaypiy. The pair in Mys Shmidta was nest building on 29 June inside an abandoned house. After the severe weather in early July, the nest was empty and birds were not seen again. One and two Barn Swallows were seen on 12 and 17 June respectively, on the spit near the mouth of the Atakan lagoon. Most of these records were of white-bellied birds. However, in Mys Shmidta settlement birds with bright red bellies were recorded alongside the white-bellied form: one bird on 8 June and two on 29 June, it is possible that these birds were the American subspecies *H. r. erythrogaster*. Unfortunately all observations of red-bellied birds were too brief for identification to subspecies to be confirmed.

#### **Northern House Martin *Delichon urbica***

Breeding species in Mys Shmidta settlement. Nine nests were found on two four-storey buildings in June 2011. Following the severe storm at the beginning of July only two nests were still occupied. This record is the most north-easterly breeding record of this species in Eurasia.

#### **House Sparrow *Passer domesticus***

Vagrant. On 17 June, an adult male was seen on Kosa Dvukh Pilotov Spit near an abandoned hut; an hour later it was seen again

near another abandoned hut about 3 km to the east. The closest breeding location is Pevek where breeding was reported in previous years (Tomkovich 2007b) and at least 10 families with broods were seen there on 13 July 2011.

### Pine Siskin *Carduelis pinus*

On 9 and 10 June 2011 we found a Pine Siskin on a sandy gravel spit near Mys Shmidta (68.872°N 179.358°W). The bird was not shy and it was possible to approach to a few metres and images were obtained. This is the first documented record for Russia and Eurasia (Arkhipov *et al.* in press).

## DISCUSSION

During the 2011 expedition to northern Chukotka 90 species were recorded, 30 of which were first records for the wider region. Overall, this confirms the paucity of previous studies of this area. Including additional data from the literature, a total of 104 species has been recorded for the region indicating a relatively complete list in comparison with nearby areas. Near Pevek town 75 species have been recorded (Tomkovich 2007b) and 152 species have been found on Wrangel Island (Stishov *et al.* 1991). Nevertheless, the list may be far from exhaustive and be expanded by subsequent visitors, especially in respect of migrant birds. Northern House Martin and Barn Swallow were recorded attempting to breed around the settlements; these species had never previously been recorded breeding this far to the north-east.

Breeding of several other species on the borders of their known western or north-western breeding range was recorded: Emperor Goose, American Golden Plover, Western Sandpiper and Semipalmated Sandpiper. Several other rare or endangered species were observed that were suspected to be breeding but without direct evidence, including two displaying Eurasian Dotterels and many Snowy Owls *Nyctea scandiaca*, with up to 13 individuals recorded per day. Emperor Geese moult in the area and a maximum day count of 1,670 was recorded. Finally, several species were observed which may be migrants, including Canada Goose, Baikal Teal, Bar-tailed Godwit, Slaty-backed Gull *Larus schistisagus*, Thayer's Gull, Black-headed Gull, White-tailed Eagle, Steller's Sea Eagle, Osprey, Arctic Warbler *Phylloscopus borealis* and House Sparrow. An observation of Pine Siskin is the first record for Eurasia.

Disappointingly, in 2011 neither the Critically Endangered Spoon-billed Sandpiper nor the Near Threatened Yellow-billed Loon *Gavia adamsii*, both of which have been recorded in the area in previous years, were seen.

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## REFERENCES

- Andreev, A. V. & Kondratyev, A. V. (1996) A new case of breeding Semipalmated Sandpiper in Chukotka. *Information Materials of the Working Group on Waders* 9: 34 (In Russian.)
- Arkhipov, V., Koshkar, S. & Noah, T. (in press) First record of Pine Siskin *Carduelis pinus* in Eurasia. *BirdingASIA*.
- BirdLife International (2001) *Threatened birds of Asia: the BirdLife International Red Data Book*. Cambridge UK: BirdLife International.
- Brazil, M. (2009) *Birds of East Asia*. London: Helm.
- Chereshnev, I.A. (2008) *Red data book of the Chukchi autonomous district* Vol. 1. Animals. Magadan: Dikiy Sever. (In Russian.)
- Dorogoi, I.V. (1996) Breeding conditions report for Ryrkaypiy settlement, Chukotka, Russia, 1996. In M.Soloviev & P.Tomkovich, eds. *ARCTIC BIRDS: an international breeding conditions survey*. (Online database). <http://www.arcticbirds.ru/info96/ru60ru11596r.html>. Updated 11 December 2008. Accessed 23 August 2013.
- Dorogoi, I.V. (1997) The fauna and distribution of waders in North-East Asia. Pp.53–87 in A.V. Andreev, ed. *Species diversity and population status of waterside birds in North-East of Asia*. (Series: *Biological Problems of the North*.) Magadan: North-East Science Centre, Far East Department of the Russian Academy of Sciences. (In Russian.)
- Dorogoi, I.V. (1998) Breeding conditions for waders in Russian tundras in 1997: Mys Shmidta area. *Information Materials of the Working Group on Waders* 11: 40. (In Russian.)
- Dorogoi, I.V. & Beaman, M. (1998) New data on breeding of Semipalmated Sandpiper in Eurasia. *Information Materials of the Working Group on Waders* 11: 48–49. (In Russian.)
- Koblik, E. A., Redkin, Ya. A. & Arkhipov, V. Yu. (2006) *Checklist of the birds of Russian Federation*. Moscow: KMK Scientific Press. (In Russian with English introduction.)
- Kishchinski A. A. (1988) *Ornithofauna of North-East Asia. History and modern state*. Moscow: Nauka. (In Russian.)
- Krechmar, A.V. & Kondrat'ev, A.V. (2006) *Waterfowl of North-East Asia*. Magadan: North-East Science Centre, Far East Department of the Russian Academy of Sciences. (In Russian.)
- Menyushina, I.E. (2000). Breeding conditions report for Mys Shmidta settlement, Chukotka, Russia, 2000. In M. Soloviev & P. Tomkovich, eds. *ARCTIC BIRDS: an international breeding conditions survey*. (Online database). <http://www.arcticbirds.net/info00%5Cru36ru11600.html>. Updated 11 December 2008. Accessed 23 August 2013.
- Inskipp, T., Lindsey, N. & Duckworth, W. (1996) *Checklist of the birds of the Oriental region*. Sandy UK: Oriental Bird Club.
- Portenko, L.A. (1972) *Birds of Chukotski peninsula and Wrangel island*. Part I. Leningrad: Nauka. (In Russian.)
- Portenko, L.A. (1973) *Birds of Chukotski peninsula and Wrangel Island*. Part II. Leningrad: Nauka. (In Russian.)
- Sibley, D. (2000) *The North American bird guide*. New York: Chanticleer Press.
- Rees, E. (2006) *Bewick's Swan*. London: T & A. D. Poyser.
- Stishov, M.S. (1991) New data on distribution of some bird species on Chukotka Arctic coast. *Ornithological problems of Siberia conference*. Available: <https://www.google.ru/#fp=5085c1f1e640d3bd&newwindow=1&psj=1&q=%22Ornithological+problems+of+Siberia%22+Conference+abstracts> (In Russian.)
- Stishov, M.S. (1992) Bird community of the lower Ekvyvatap River (Vancarem Lowland, Chukotka). *Russian Journal of Ornithology* 1(2):245–251. (In Russian.)
- Stishov, M. S. (1997) Breeding conditions report for Mys Shmidta settlement, Chukotka, Russia, 1997. In M.Soloviev & P.Tomkovich, eds. *ARCTIC BIRDS: an international breeding conditions survey*. (Online database). <http://www.arcticbirds.ru/info97/ru30ru11697r.html>. Updated 11 december 2008. Accessed 23 August 2013.
- Stishov, M. S. (2004) *Wrangel Island – truly natural but a natural anomaly*. Yoshkar-Ola: Izdatelstvo Mariyskogo Poligrafkombinata. (In Russian.)
- Stishov, M. S. & Maryuhnich, P. V. (1991a) Spoon-billed Sandpiper in the western Vankarem Lowlands. Pp.125–126 in V. Yu. Il'yashenko and L. N. Mazin, compilers *The study of rare animals in the R.S.F.S.R*. Moscow: Central Science Research Laboratory for Game Management and Nature Reserves. (In Russian.)
- Stishov, M. S. & Maryuhnich, P. V. (1991b) Buff-breasted Sandpiper in the Cape Yakan area and Ekvyvatap River valley (Arctic coast of Chukotka). Pp.126–129 in V. Yu. Il'yashenko & L. N. Mazin, compilers *The study of*



- rare animals in the R.S.F.S.R.* Moscow: Central Science Research Laboratory for Game Management and Nature Reserves. (In Russian.)
- Stishov, M. S., Pridatko, V. I. & Baranyuk, V. V. (1991) *Birds of Wrangel Island*. Novosibirsk: Nauka. (In Russian.)
- Taldenkov, I. A. (2006) Record of mixed breeding of American Plover and Gray Plover at northern Chukchi peninsula. *Information Materials of the Working Group on Waders* 19: 39–41. (In Russian.)
- Tomkovich, P. S. (1998) Breeding conditions for waders in Russian tundras in 1994. *International Wader Studies* 10: 132–144.
- Tomkovich, P. S. (2007a) Population dynamics of the Dotterel *Eudromias morinellus*: alarming thoughts on the background of poor knowledge. *Information Materials of the Working Group on Waders* 20: 43–45. (In Russian.)
- Tomkovich, P. S. (2007b) Annotated bird list for Pevek town vicinity, Chukotka autonomous area, the Far East of Russia. *Ornithologia* 34 (2): 176–185. (In Russian.)
- Tomkovich, P. S., Masterov, V. B. & Soloviev M. Y. (1991) Avifauna of Mys Shmidta, Chukchi Sea. *Ornithologia* 25: 175–176. (In Russian.)

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## Appendix

### Annotated checklist of birds recorded in Mys Shmidta area

\*Indicates a species not recorded during surveys and added from the literature.

Status: R=Resident, P=Passage, S=Summer visitor, B=Breeder, B? = Possible breeder, V=Vagrant, U=Unclear, (Lit) indicates status according to the literature.

Species	Status	Previous records	Species	Status	Previous records
*Willow Ptarmigan <i>Lagopus lagopus</i>	R (Lit)	7, 16	*Spotted Redshank <i>Tringa erythropus</i>	V (Lit)	2, 3
Rock Ptarmigan <i>Lagopus mutus</i>	R	7	Wood Sandpiper <i>Tringa glareola</i>	V	16
Whooper Swan <i>Cygnus cygnus</i>	U	First record	*Terek Sandpiper <i>Xenus cinereus</i>	PB? (Lit)	9
Tundra Swan <i>Cygnus calumbianus</i>	B	9	*Grey-tailed Tattler <i>Heterascelus brevipes</i>	V (Lit)	7
Bean Goose <i>Anser fabalis</i>	P	7	Ruddy Turnstone <i>Arenaria interpres</i>	PB	3, 4, 10, 16
Greater White-fronted Goose <i>Anser albifrons</i>	PB	7, 10, 16	Long-billed Dowitcher <i>Limnodramus scalapaceus</i>	PB	10
Snow Goose <i>Anser caerulescens</i>	P	7, 16	Great Knot <i>Calidris tenuirostris</i>	V	First record
Emperor Goose <i>Anser canagica</i>	PB	First record	Red Knot <i>Calidris canutus</i>	PB?	First record
Canada Goose <i>Branta canadensis</i>	V	First record	Western Sandpiper <i>Calidris mauri</i>	PB	First record
Brent Goose <i>Branta bernicla</i>	P B?	7	*Spoon-billed Sandpiper <i>Eurynarhynchus pygmeus</i>	PB? (Lit)	9, 13
Northern Pintail <i>Anas acuta</i>	PB	7, 10	Little Stint <i>Calidris minuta</i>	PB?	9
Baikal Teal <i>Anas farmasa</i>	P	7	Red-necked Stint <i>Calidris ruficallis</i>	PB	2, 3, 4, 7, 9, 15, 16
Common Teal <i>Anas crecca</i>	P	First record	Temminck's Stint <i>Calidris temminckii</i>	PB	4, 15, 16
Greater Scaup <i>Aythya marila</i>	PB?	7	Semipalmated Sandpiper <i>Calidris pusilla</i>	PB	1, 5
Common Eider <i>Samateria mallissima</i>	PB	7, 10, 16	*Baird's Sandpiper <i>Calidris bairdii</i>	PB? (Lit)	10
King Eider <i>Samateria spectabilis</i>	PB?	7, 10	Pectoral Sandpiper <i>Calidris melanatas</i>	PB	3, 4, 7, 10
Spectacled Eider <i>Samateria fischeri</i>	PB?	10	*Sharp-tailed Sandpiper <i>Calidris acuminata</i>	V (Lit)	7
Steller's Eider <i>Palysticta stelleri</i>	P	7	Dunlin <i>Calidris alpina</i>	PB	3, 4, 10, 16
Harlequin Duck <i>Histrionicus histrionicus</i>	P	First record	*Curlew Sandpiper <i>Calidris ferruginea</i>	P (Lit)	3, 16
Long-tailed Duck <i>Clangula hyemalis</i>	PB	7, 10, 16	Buff-breasted Sandpiper <i>Tryngites subruficallis</i>	PB	9, 10, 14
Black Scoter <i>Melanitta nigra americana</i>	P	First record	Ruff <i>Phalacrocorax pugnax</i>	PB	2, 3, 10
White-winged Scoter <i>Melanitta fusca steinegeri</i>	P	First record	Red-necked Phalarope <i>Phalaropus lobatus</i>	PB	3, 4, 10, 15
Red-breasted Merganser <i>Mergus serrator</i>	P	First record	Red Phalarope <i>Phalaropus fulicaria</i>	PB	3, 7, 10
Snowy Owl <i>Nyctea scandiaca</i>	R	4, 6, 8, 11	Pacific Golden Plover <i>Pluvialis fulva</i>	PB	7, 9, 10, 16
Short-eared Owl <i>Asia flammeus</i>	PB?	8	American Golden Plover <i>Pluvialis dominicus</i>	PB	9, 12
Sandhill Crane <i>Grus canadensis</i>	PB	7, 10, 16	Grey Plover <i>Pluvialis squatarola</i>	PB	10, 16
Common Snipe <i>Gallinago gallinago</i>	PB	3, 4, 10	Common Ringed Plover <i>Charadrius hiaticula</i>	PB	4, 7, 10, 16
Bar-tailed Godwit <i>Limasa lappanica</i>	V	First record	*Semipalmated Plover <i>Charadrius semipalmatus</i>	PB? (Lit)	12

Species	Status	Previous records	Species	Status	Previous records
Eurasian Døtterel <i>Eudramias marinellus</i>	PB?	2,3	Red-throated Loon <i>Gavia stellata</i>	PB	7,10
Pomarine Skua <i>Stercorarius pamarinus</i>	PB	4,8,10,15	Black-throated Loon <i>Gavia arctica</i>	PB	7,10
Parasitic Skua <i>Stercorarius parasiticus</i>	PB	2,4,8,10	Pacific Loon <i>Gavia pacifica</i>	PB	7,10
Long-tailed Skua <i>Stercorarius langicaudus</i>	PB	2,4,8,10	*Yellow-billed Loon <i>Gavia adamsii</i>	U (Lit)	7
Mew Gull <i>Larus canus</i>	PS	First record	Common Raven <i>Corvus corax</i>	PB	8
Glaucous Gull <i>Larus hyperboreus</i>	PB	8,10,16	*Grey-cheeked Thrush <i>Catharus minimus</i>	V (Lit)	8
Slaty-backed Gull <i>Larus schistisagus</i>	V	First record	*Dusky Thrush <i>Turdus naumanni</i>	V (Lit)	16
Vega Gull <i>Larus vegae</i>	PB	8,10,16	Bluethroat <i>Luscinia svecica</i>	P	16
Thayer's Gull <i>Larus thayeri</i>	V	First record	Northern Wheatear <i>Oenanthe aenanthe</i>	PB	10,16
Black-headed Gull <i>Larus ridibundus</i>	V	16	Barn Swallow <i>Hirunda rustica</i>	PB	First record
Rass's Gull <i>Rhadastethia rasea</i>	PS	8	Northern House Martin <i>Delichan urbica</i>	PB	First record
*Sabine's Gull <i>Xema sabini</i>	P (Lit)	8	Arctic Warbler <i>Phylloscopus borealis</i>	P	First record
Black-legged Kittiwake <i>Rissa tridactyla</i>	PB?	8	Horned Lark <i>Eremophila alpestris</i>	U	First record
Arctic Tern <i>Sterna paradisaea</i>	PB	8	House Sparrow <i>Passer domesticus</i>	V	First record
Common Murre <i>Uria aalge</i> or Thick-billed Murre <i>U. lomvia</i>	PS	First record	White Wagtail <i>Motacilla alba</i>	PB	8,10
Black Guillemot <i>Cephus grylle</i>	PB	8	Yellow Wagtail <i>Motacilla flava tschutschensis</i>	PB	8,16
Osprey <i>Pandion haliaetus</i>	V	First record	Red-throated Pipit <i>Anthus cervinus</i>	PB	10,16
White-tailed Eagle <i>Haliaeetus albicilla</i>	V	First record	Pine Siskin <i>Carduelis pinus</i>	V	First record
Steller's Sea Eagle <i>Haliaeetus pelagicus</i>	V	First record	Hairy Redpoll <i>Carduelis harrismanni</i>	PB	8,10,16
Rough-legged Buzzard <i>Butea lagopus</i>	PB	2	Common Redpoll <i>Carduelis flammea</i>	V	First record
Merlin <i>Falca calumbarius</i>	U	First record	Little Bunting <i>Emberiza pusilla</i>	V	First record
*Gyr Falcon <i>Falca rusticalus</i>	U (Lit)	7	Pallas's Bunting <i>Emberiza pallasi</i>	V	First record
Peregrine Falcon <i>Falca peregrinus</i>	PB?	First record	Lapland Longspur <i>Calcarius lapponicus</i>	PB	8,10,16
Pelagic Cormorant <i>Phalacrocorax pelagicus</i>	PB	7	Snow Bunting <i>Plectrophenax nivalis</i>	PB	8,10,16

Previous records: 1: Andreev & Kondratyev (1996), 2: Dorogoi (1996), 3: Dorogoi (1997), 4: Dorogoi (1998), 5: Dorogoi & Beaman (1998), 6: Menyushina (2000), 7: Portenko (1972), 8: Portenko (1973), 9: Stishov (1991), 10: Stishov (1992), 11: Stishov (1997), 12: Stishov (2004), 13: Stishov & Maryuhnich (1991a), 14: Stishov & Maryuhnich (1991b), 15: Tomkovich (1998), 16: Tomkovich *et al.* (1991)